

Claims

- [c1] 1. An imaging assembly comprising:
an x-ray source;
a controller in communication with said x-ray source;
a detector assembly in communication with said controller, said detector assembly comprising:
a detector array in communication with said controller;
a scintillator assembly positioned between said photodetector array and said x-ray source;
a collimator assembly positioned in between said scintillator assembly and said x-ray source; and
an electroluminescent panel in communication with said scintillator assembly, said electroluminescent panel in communication with said controller, said electroluminescent panel having an active condition wherein said electroluminescent panel generates radiation eliciting a response from said detector array.
- [c2] 2. An imaging assembly as described in claim 1, further comprising:
a reflector film in communication with said electroluminescent panel, said reflector film positioned between said electroluminescent panel and said scintillator, said

reflector film allowing said radiation to pass through while reflecting light generated by said scintillator assembly.

[c3] 3. An imaging assembly as described in claim 2, wherein said reflector film comprises dielectric reflector film allowing said radiation to pass into said scintillator, said dielectric reflector film preventing said radiation from passing out of said scintillator.

[c4] 4. An imaging assembly as described in claim 1, wherein said electroluminescent panel generates non-exciting radiation.

[c5] 5. An imaging assembly as described in claim 1, wherein said electroluminescent panel generates exciting radiation.

[c6] 6. An imaging assembly as described in claim 1, wherein said controller comprises:
a logic adapted to:
generate said radiation using said electroluminescent panel;
receive said response from said detector array; and
diagnose said detector assembly using said response.

[c7] 7. An imaging assembly as described in claim 1, wherein said controller comprises:

a logic adapted to:
generate said radiation using said electroluminescent panel;
receive said response from said detector array; and
calibrate said detector assembly using said response.

[c8] 8. An imaging assembly as described in claim 1, wherein said controller comprises:
a logic adapted to:
generate said radiation using said electroluminescent panel;
receive said response from said detector array; and
monitor said detector assembly using said response.

[c9] 9. An imaging assembly as described in claim 1, wherein said controller comprises:
a logic adapted to:
test only a portion of said detector assembly.

[c10] 10. An imaging assembly as described in claim 9, wherein said portion comprises a selected cell.

[c11] 11. An imaging assembly as described in claim 2, wherein said dielectric reflector film comprises a multi-layer band pass film.

[c12] 12. An imaging assembly as described in claim 2, wherein said dielectric reflector film comprises a one-

way mirror film.

- [c13] 13. An imaging detector assembly comprising:
a controller;
a detector assembly in communication with said controller, said detector assembly comprising:
a photodetector array in communication with said controller;
a collimator assembly;
a scintillator assembly; positioned between said photodetector array and said collimator assembly; and
an electroluminescent panel positioned between said collimator assembly and said scintillator assembly, said electroluminescent panel in communication with said controller, said electroluminescent panel having an active condition wherein said electroluminescent panel generates radiation eliciting a response from said detector array.
- [c14] 14. An imaging assembly as described in claim 13, further comprising:
a reflector film in communication with said electroluminescent panel, said reflector film positioned between said electroluminescent panel and said scintillator, said reflector film allowing said radiation to pass through while reflecting light generated by said scintillator assembly.

- [c15] 15. An imaging detector assembly as described in claim 13, wherein said electroluminescent panel comprises:
a first conductive film;
a second conductive film; and
an electro luminescent film between said first conductive film and said second conductive film.
- [c16] 16. An imaging detector assembly as described in claim 13, wherein said first conductive film comprises a transparent conductor.
- [c17] 17. An imaging detector assembly as described in claim 13, wherein said first conductive film comprises a metallic conductor.
- [c18] 18. A method of testing an imaging detector assembly comprising:
generating radiation from an electroluminescent panel positioned in communication with a scintillator assembly;
receiving a response signal from a detector array, said response signal generated by said detector array in response to said radiation; and
evaluating the imaging detector assembly using said response signal.
- [c19] 19. A method of testing an imaging detector assembly as

described in claim 18, wherein said evaluating said imaging detector assembly comprises:
diagnosing said imaging detector assembly.

[c20] 20. A method of testing an imaging detector assembly as described in claim 18, wherein said evaluating said imaging detector assembly comprises:
calibrating said imaging detector assembly.

[c21] 21. A method of testing an imaging detector assembly as described in claim 18, further comprising:
activating said electroluminescent panel from a remote location; and evaluating said imaging detector assembly from said remote location.